```
            GN, ML, MR, NE, SN, TD, TG
      AU 9745703          A1   19990503        AU 1997-45703     19971010
      CA 2312008          AA   19990422        CA 1998-2312008   19981008
      WO 9919498          A1   19990422        WO 1998-IL487     19981008
          W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE,
              KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,
              MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
              TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
              FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
              CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      AU 9894572          A1   19990503        AU 1998-94572     19981008
      EP 1021552          A1   20000726        EP 1998-947760    19981008
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO


=> logoff y
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                      75.68      75.89

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                        ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -3.10      -3.10

STN INTERNATIONAL LOGOFF AT 14:11:00 ON 30 NOV 2002


Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:ssspta1649axm

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Apr 08  "Ask CAS" for self-help around the clock
 NEWS  3  Apr 09  BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09  ZDB will be removed from STN
 NEWS  5  Apr 19  US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22  Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22  BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22  Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03  New e-mail delivery for search results now available
 NEWS 10  Jun 10  MEDLINE Reload
 NEWS 11  Jun 10  PCTFULL has been reloaded
 NEWS 12  Jul 02  FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22  USAN to be reloaded July 28, 2002;
                  saved answer sets no longer valid
 NEWS 14  Jul 29  Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30  NETFIRST to be removed from STN
 NEWS 16  Aug 08  CANCERLIT reload
 NEWS 17  Aug 08  PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08  NTIS has been reloaded and enhanced
```

```
NEWS 19  Aug 19  Aquatic Toxicity Information Retrieval (AQUIRE)
                 now available on STN
NEWS 20  Aug 19  IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21  Aug 19  The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22  Aug 26  Sequence searching in REGISTRY enhanced
NEWS 23  Sep 03  JAPIO has been reloaded and enhanced
NEWS 24  Sep 16  Experimental properties added to the REGISTRY file
NEWS 25  Sep 16  Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26  Sep 16  CA Section Thesaurus available in CAPLUS and CA
NEWS 27  Oct 01  CASREACT Enriched with Reactions from 1907 to 1985
NEWS 28  Oct 21  EVENTLINE has been reloaded
NEWS 29  Oct 24  BEILSTEIN adds new search fields
NEWS 30  Oct 24  Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 31  Oct 25  MEDLINE SDI run of October 8, 2002
NEWS 32  Nov 18  DKILIT has been renamed APOLLIT
NEWS 33  Nov 25  More calculated properties added to REGISTRY
NEWS 34  Dec 02  TIBKAT will be removed from STN
NEWS 35  Dec 04  CSA files on STN
NEWS 36  Dec 17  PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 37  Dec 17  TOXCENTER enhanced with additional content
NEWS 38  Dec 17  Adis Clinical Trials Insight now available on STN

NEWS EXPRESS  October 14 CURRENT WINDOWS VERSION IS V6.01,
              CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
              AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS    STN Operating Hours Plus Help Desk Availability
NEWS INTER    General Internet Information
NEWS LOGIN    Welcome Banner and News Items
NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *



FILE 'HOME' ENTERED AT 15:27:35 ON 27 DEC 2002

=> s antibody and plant
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files.  For example, the EXPAND
command can only be used to look at the index in a file which has an
index.  Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

=> file agricola
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'AGRICOLA' ENTERED AT 15:27:51 ON 27 DEC 2002


FILE COVERS 1970 TO 11 Dec 2002 (20021211/ED)

Compiled and distributed by the National Agricultural Library
```

of the Department of Agriculture of the United States of America. It contains copyrighted material. All rights reserved. (2002)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s (antibody or antibodies) and plant
         12448 ANTIBODY
         16620 ANTIBODIES
        271731 PLANT
L1        2091 (ANTIBODY OR ANTIBODIES) AND PLANT

=> s l1 and immunoglobulin
          2431 IMMUNOGLOBULIN
L2          43 L1 AND IMMUNOGLOBULIN

=> s l2 and transgneic
             0 TRANSGNEIC
L3           0 L2 AND TRANSGNEIC

=> s l2 and transgenic
         10839 TRANSGENIC
L4          16 L2 AND TRANSGENIC

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5           16 DUP REM L4 (0 DUPLICATES REMOVED)

=> d 11-16 ti

L5   ANSWER 11 OF 16  AGRICOLA
TI   Expression of engineered antibodies in plant cells.

L5   ANSWER 12 OF 16  AGRICOLA
TI   Characteristics and applications of antibodies produced in
     plants.

L5   ANSWER 13 OF 16  AGRICOLA
TI   Assembly of multimeric proteins in plant cells: characterisitics
     and uses of plant-derived antibodies.

L5   ANSWER 14 OF 16  AGRICOLA
TI   Assembly of anitbodies and mutagenized variants in transgenic
     plants and plant cell cultures.

L5   ANSWER 15 OF 16  AGRICOLA
TI   'Phytoantibodies': a general vector for the expression of
     immunoglobulin domains in transgenic plants.

L5   ANSWER 16 OF 16  AGRICOLA
TI   Synthesis and self-assembly of a functional monoclonal antibody
     in transgenic Nicotiana tabacum.


=> d 12 so

L5   ANSWER 12 OF 16  AGRICOLA
SO   Current plant science and biotechnology in agriculture, 1993. Vol. 14 p.
     549-560
     Publisher: Dordrecht : Kluwer Academic Publishers.
     ISSN: 0924-1949


=> d 11 so
```

L5 ANSWER 11 OF 16 AGRICOLA
SO Plant molecular biology, Nov 1994. Vol. 26, No. 4. p. 1023-1030
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDB; ISSN: 0167-4412

=> d 11 ab

L5 ANSWER 11 OF 16 AGRICOLA

=> d 16 ab

L5 ANSWER 16 OF 16 AGRICOLA
AB **Immunoglobulin** light and heavy chains are synthesized in mammalian cells as precursors containing a signal peptide. Processing and assembling result in formation of active **antibodies**. Chimeric genes have been made containing the coding sequence of the barley alpha-amylase signal peptide which has been fused to cDNAs coding for either the mature light or the mature heavy chain of a monoclonal **antibody**. A plasmid was constructed linking both chimeric genes under the control of **plant** active promoters in an expression cassette. This DNA fragment was stably integrated into the genome of Nicotiana tabacum by Agrobacterium tumefaciens mediated gene transfer. Synthesis of light and heavy chains and assembly to **antibodies** was detected in **transgenic** tobacco tissue using specific secondary **antibodies**. By electron microscopic immunogold labeling, the presence of assembled **antibody** could be detected within the endoplasmic reticulum. Affinity chromatography indicated biological activity of the assembled **immunoglobulin** produced in **plant** cells. Unexpectedly, a significant amount of assembled **antibodies** was found within chloroplasts.

=> d 5-10 ti

L5 ANSWER 5 OF 16 AGRICOLA
TI Transient expression of a tumor-specific single-chain fragment and a chimeric **antibody** in tobacco leaves.

L5 ANSWER 6 OF 16 AGRICOLA
TI Rapid production of specific vaccines for lymphoma by expression of the tumor-derived single-chain Fv epitopes in tobacco plants.

L5 ANSWER 7 OF 16 AGRICOLA
TI Seed-specific immunomodulation of abscisic acid activity induces a developmental switch.

L5 ANSWER 8 OF 16 AGRICOLA
TI Generation and assembly of secretory **antibodies** in plants.

L5 ANSWER 9 OF 16 AGRICOLA
TI Immunotherapeutic potential of **antibodies** produced in plants.

L5 ANSWER 10 OF 16 AGRICOLA
TI **Plant antibodies** for immunotherapy.

=> d 10 so

L5 ANSWER 10 OF 16 AGRICOLA
SO Plant physiology, Oct 1995. Vol. 109, No. 2. p. 341-346
Publisher: Rockville, MD : American Society of Plant Physiologists, 1926-
CODEN: PLPHAY; ISSN: 0032-0889

=> d 10 ab

L5 ANSWER 10 OF 16 AGRICOLA

=> d 9 ab

L5 ANSWER 9 OF 16 AGRICOLA
AB Plants are capable of synthesizing and assembling virtually every kind of **antibody** molecule, ranging from the smallest antigen-binding domains and fragments, to full length, and even multimeric, **antibodies**. A number of **plant** hosts can be used, and because this is a versatile expression system mat can be scaled-up to agricultural proportions, a cheap and plentiful supply of **antibodies** could be made available. Immunotherapy is one of me many potential uses for bulk quantities of **antibody**. In particular, passive immunotherapy of mucosal surfaces may be possible, because functional secretory **antibodies** can be engineered in plants.

=> d 8 ab

L5 ANSWER 8 OF 16 AGRICOLA
AB Four **transgenic** Nicotiana tabacum plants were generated that expressed a murine monoclonal **antibody** kappa chain, a hybrid **immunoglobulin** A-G heavy chain, a murine joining chain, and a rabbit secretory component, respectively. Successive sexual crosses between these plants and filial recombinants resulted in plants that expressed all four protein chains simultaneously. These chains were assembled into a functional, high molecular weight secretory **immunoglobulin** that recognized the native streptococcal antigen I/II cell surface adhesion molecule. In plants, single cells are able to assemble secretory **antibodies**, whereas two different cell types are required in mammals. **Transgenic** plants may be suitable for large-scale production of recombinant secretory **immunoglobulin** A for passive mucosal immunotherapy. **Plant** cells also possess the requisite mechanisms for assembly and expression of other complex recombinant protein molecules.

=> d 6 so

L5 ANSWER 6 OF 16 AGRICOLA
SO Proceedings of the National Academy of Sciences of the United States of America, Jan 19, 1999. Vol. 96, No. 2. p. 703-708
Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424

=> d 10 ab

L5 ANSWER 10 OF 16 AGRICOLA

=> s plant and secrete
271731 PLANT
432 SECRETE
L6 92 PLANT AND SECRETE

=> s l6 and transgenic
10839 TRANSGENIC
L7 5 L6 AND TRANSGENIC